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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/315,688	05/20/1999	EDWARD SHANBROM	38786.00069	6828

7590 01/30/2003

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EXAMINER	
OLSEN, KAJ K	
ART UNIT	PAPER NUMBER
1753	

DATE MAILED: 01/30/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/315,688	SHANBROM, EDWARD	
	Examiner	Art Unit	
	Kaj Olsen	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *15* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. For the information disclosure statement filed on 3-12-2002, the examiner has not considered two of the listed references. The references Cheregi and Coetzee were not considered because the examiner has already considered these references in an earlier Notice of References Cited.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 6 is drawn to a method for determining a composite measure of characteristics of dietary antioxidants. The use of the term "characteristics" is vague and it is unclear what the scope of this term would be. Applicant does not appear to provide any definition of what would reasonably be construed as being a "characteristic" of a dietary antioxidant. Moreover, the use of this term is further confused by the fact that this "characteristic" is a function of a composite measure of the iodide ions.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (Chemical Sensors, vol. 15, pp. 295-297 (1995) in view of Coetzee (S. Afr. Tydskr, Chem., vol. 44, pp. 22-24 (1991)) with or without the further teaching of Alexander et al (Proceedings of the International Symposium on Povidone, 1983).

7. Chen discloses a method of determining the level of a dietary antioxidant (ascorbic acid) in a dietary material (a beverage) by exposing a liquid sample to iodine solution and measuring a change is concentration of iodide ions using a iodide-cyanide selective electrode (see translation of Chen provided with this office action). Chen did not disclose the use of a solution of iodine with an iodophor. However, Coetzee in an alternate analytical technique discloses that iodine complexed with iodophors such as polyvinylpyrrolidone is a preferable source of iodine due to its greater stability than that of iodine solutions (see first paragraph). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize an iodophor in order to stabilize the source of iodine.

8. Although Chen does not explicitly teach performing the analysis at room temperature, Chen does suggests normal (i.e. room) temperature is useable, but the reaction progresses at a slower rate than would occur at an elevated temperature (p. 3 of translation, lines 12 and 13). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the method disclosed by Chen at room temperature, provided that one were willing to forgo the advantages of quicker reaction times, in order to obviate the need for stable

sources of elevated temperature such as a water bath. A water bath is not very portable and obviating the use of it would allow the method of Chen to be more easily transportable.

9. Furthermore, Alexander teaches that the iodophor (i.e. polyvinylpyrrolidone) iodine complex of Coatzee reacts very rapidly with ascorbic acid at temperatures near room temperature (see first three lines of "Stoichiometric Assays" on p. 275 and paragraph four of p. 277). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Alexander and utilize room temperature instead of the elevated temperatures of Chen because those elevated temperatures are unnecessary when the iodine is complexed to a iodophor. One possessing ordinary skill in the art would bother to utilize elevated temperature when they have been determined to be unnecessary for successful reactions to occur.

10. With respect to new claim 6 as best understood (those limitations not already discussed above), although Chen does not explicitly disclose monitoring the iodide ions at a plurality of time points, it would have been obvious to one of ordinary skill in the art at the time the invention was being made to monitor the samples of Chen at a plurality of times for a number of reasons. First, a plurality of time measurements would indicate to Chen that the rate that the iodine is reacting with the antioxidant. Such a measurement would allow one possessing ordinary skill in the art to determine how much time after the addition of the iodine to the sample must elapse before the reaction is considered complete (p. 3 of translation, lines 12 and 13). Second, measurements at a plurality of time points would allow one possessing ordinary skill in the art to determine the degree of precision and stability of the measurement. Increases or decreases as a function of time would indicate how stable the measurement is and how that

stability is affected over time. These circumstances for monitoring at a plurality of times would appear to read on the claim language drawn to the "characteristics" of the dietary antioxidants.

Response to Arguments

11. Applicant's arguments filed on 9-30-2002 have been fully considered but they are not persuasive. Applicant urges that the references do not specify anything about the effect of reaction speeds. Whether or not this is the case (see arguments below), it is unclear how this would call into question the appropriateness of the rejection. Even if the references made no mention of the fact that the iodophor would increase the reaction speed, it still would have been obvious to utilize the teaching of Coatzee for the method of Chen for the stability that the iodophor provides. Discovering a new reason for the utilization of an iodophor with iodine, when it was already obvious for other reasons to utilize an iodophor, cannot impart patentability over the prior art. Moreover, it does not appear that the rapidness of reaction is necessarily unexpected. In particular, the reference Alexander recognized additional advantages of the povidone-iodine complex. In addition to the increase stability (as already mentioned in Coatzee), the povidone-iodine complex is water soluble (p. 274, paragraph 1) and reacted with ascorbic acid very rapidly even at room temperature (see rejection above). In addition, Coatzee is also presumably utilizing room temperature for his reaction of PVP-iodine with ascorbic acid because he does not specify the need for elevated temperatures.

12. Applicant further urges that if a skilled artisan were making a test of the Chen method at room temperature, there would be no reason to utilize PVP. This is not persuasive for two reasons. First, the rapid reaction of an iodophor-iodine complex with room temperature

antioxidants (i.e. ascorbic acid) was not unexpected (see Alexander and arguments made above). Second, the examiner is of the opinion that utilizing the method of Chen at room temperature would have been within the purview of one possessing ordinary skill in the art, because even Chen indicated it would work (albeit not as well). If the method of Chen were useable at room temperatures, then it follows that it still would have been obvious to utilize the teaching of Coatzee for the same reasons given for utilizing Coatzee at the previous elevated temperatures of Chen. Third, Alexander already taught that elevated temperatures are unnecessary for a successful reaction between PVP-iodine complex and ascorbic acid.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 8:30 AM-6:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Robert Warden, can be reached at (703) 308-2920.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for regular communications is (703) 305-3599 and the fax number form after-final communications is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

Kaj K. Olsen
Patent Examiner
AU 1744
January 10, 2003

ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
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